Unit 4 Assignment 1 Learning Aim A Student Guide DISTINCTION

©THECOMPUTINGTUTOR

ALL TEXT COPYRIGHT © THECOMPUTINGTUTOR 2020. ALL RIGHTS RESERVED.

Learning Aim A: Examine the Computational Thinking Skills and Principles of Computer Programming

©THECOMPUTINGTUTOR

ALL TEXT COPYRIGHT © THECOMPUTINGTUTOR 2020. ALL RIGHTS RESERVED.

Evidence Required for: A.P1, A.M1, A.D1

©THECOMPUTINGTUTOR

ALL TEXT COPYRIGHT © THECOMPUTINGTUTOR 2020. ALL RIGHTS RESERVED.

A.P1 What is Computational Thinking

Include a brief paragraph explaining what computational thinking means.

Resources and Information	**Textbook page 222**
Have I done This?	
Am I confident on This?	

ALL TEXT COPYRIGHT © THECOMPUTINGTUTOR 2020. ALL RIGHTS RESERVED.

A.P1 Computational thinking - Decomposition

Describe here the meanings of decomposition as the process of problem into smaller steps, with an example from your research

Resources and Information	**Textbook page 222**
Have I done This?	
Am I confident on This?	

ALL TEXT COPYRIGHT © THECOMPUTINGTUTOR 2020. ALL RIGHTS RESERVED.

A.P1 Computational Thinking – Pattern Recognition

Describe here the meanings of identifying patterns, with an example from your research

Resources and Information	**Textbook page 224**
Have I done This?	
Am I confident on This?	

ALL TEXT COPYRIGHT © THECOMPUTINGTUTOR 2020. ALL RIGHTS RESERVED.

A.P1 Computational Thinking – Pattern Generalisation and Abstraction

Describe here the meanings of removing unnecessary information, with an example from your research

Resources and Information	**Textbook page 225**
Have I done This?	
Am I confident on This?	

ALL TEXT COPYRIGHT © THECOMPUTINGTUTOR 2020. ALL RIGHTS RESERVED.

A.M1 Assess Computational Thinking

ADVANTAGES

Assess the previous features and list all the positive impacts on the **design of a software** program and the **quality of the final program**

- Advantage 1
- Advantage 2 etc.

DISADVANTAGES

Assess the previous features and list all the negative impacts to the **design of a software** program and the **quality of the final program**

- Disadvantage 1
- Disadvantage 2 etc.

Resources and Information	**Textbook page 222 - 225**
Have I done This?	
Am I confident on This?	

ALL TEXT COPYRIGHT © THECOMPUTINGTUTOR 2020. ALL RIGHTS RESERVED.

A.D1 Evaluate Computational Thinking

Evaluate whether computational thinking has an impact on the **design of a software program** and the **quality of the final program**

You must discuss the pros and cons and come up with an answer.

You must **JUSTIFY** why the feature either does or does not have an impact on the software design and the overall quality of the program.

Resources and Information	**Textbook page 222 - 225**
Have I done This?	
Am I confident on This?	

ALL TEXT COPYRIGHT © THECOMPUTINGTUTOR 2020. ALL RIGHTS RESERVED.

A.P1 Computational Thinking – Identification of Key Components

Component	Definition
Variable	
Constant	
Key Process	
Repeated Process	
Inputs	
Outputs	

Resources and Information	Textbook page 225
Have I done This?	
Am I confident on This?	

ALL TEXT COPYRIGHT © THECOMPUTINGTUTOR 2020. ALL RIGHTS RESERVED.

A.P1 Identify Variables

List of variables	Description of variables
List as many variables as you can think of that are used in your program example	Explain briefly what these variables do
e.g. Password variable	Stores the user input for a password

Resources and Information	Textbook page 222
Have I done This?	
Am I confident on This?	

ALL TEXT COPYRIGHT © THECOMPUTINGTUTOR 2020. ALL RIGHTS RESERVED.